

A Literature Review

---

***Breast and Cervical  
Cancer Screening:***

**Barriers and Use Among  
Specific Populations**

Office of Minority Health  
Resource Center  
PO Box 37337  
Washington, DC 20013-7337

***Supplement 3***  
**January 1995**

AMC Cancer Research Center  
*with funding from the*  
U.S. Centers for Disease Control and Prevention

MH95D2408



**BREAST AND CERVICAL SCREENING:  
BARRIERS AND USE  
AMONG SPECIFIC POPULATIONS**

**A Review of Literature  
Prepared for Public Health Planners**

*Supplement 3  
June 93 - May 94*

**AMC Cancer Research Center  
with funding from the  
U.S. Centers for Disease Control and Prevention  
Cooperative Agreement No. U50/CCU806186-04**

**January 1995**



# TABLE OF CONTENTS



ACKNOWLEDGEMENTS .....	Office of Minority Health ; Resource Center PO Box 37337..... 1 Washington, DC 20013-7337
INTRODUCTION .....	
FEMALE POPULATION AS A WHOLE	
Background .....	3
MAMMOGRAPHY	
Barriers .....	4
Programs .....	6
PAP SMEARS	
Barriers .....	10
Programs .....	11
MAMMOGRAPHY AND PAP SMEARS	
Programs .....	12
Implications .....	13
Citations .....	13
LOW INCOME WOMEN	
Background .....	16
MAMMOGRAPHY	
Barriers .....	16
Programs .....	17
Implications .....	17
Citations .....	18
AFRICAN-AMERICAN WOMEN	
Background .....	19
MAMMOGRAPHY	
Barriers .....	19
Programs .....	20
Implications .....	22
Citations .....	22
HISPANIC WOMEN	
Background .....	23
MAMMOGRAPHY	
Barriers .....	23
Programs .....	25
PAP SMEARS	
Barriers .....	26
Programs .....	26
Implications .....	27
Citations .....	27



## **NATIVE AMERICAN WOMEN**

Background .....	29
<b>MAMMOGRAPHY</b>	
Barriers .....	29
Programs .....	30
<b>PAP SMEARS</b>	
Barriers .....	30
Programs .....	31
Implications .....	32
Citations .....	33

## **WOMEN OVER 50**

Background .....	34
<b>MAMMOGRAPHY</b>	
Barriers .....	34
Programs .....	35
Implications .....	36
Citations .....	36

## **PHYSICIANS**

Background .....	37
<b>MAMMOGRAPHY AND PAP SMEARS</b>	
Barriers .....	37
<b>MAMMOGRAPHY</b>	
Barriers .....	38
Programs .....	39
Implications .....	41
<b>PAP SMEARS</b>	
Barriers .....	41
Implications .....	42
Citations .....	42





## ACKNOWLEDGEMENTS

This report was written by Sally Casey, M.P.H., Kathy Plomer, M.P.H., and Martha Tenney, M.P.H. The literature search was conducted by Eleanor Krakauer, M.S.L.S. with assistance from Vera Knoll. The report was edited by Cathy Coyne, M.P.H.

*Breast and Cervical Screening: Barriers and Use among Specific Populations - Supplement 3* was produced by AMC Cancer Research Center under Cooperative Agreement No. U50/CCU806186-04 with the U.S. Centers for Disease Control and Prevention.

**For more information contact:**

*Breast and Cervical Cancer Technical Assistance  
and Training Program*

AMC Cancer Research Center  
1600 Pierce Street  
Denver, CO 80214

[NOTE: Articles referenced in the literature review are cited at the end of the section in which they appear.]



## INTRODUCTION

### *Notes*

This literature review is the fourth in a series that began in 1991. A total of 76 articles published from June 1993 - May 1994 have been summarized in this document. In addition, a few articles published prior to June 1993 that had not been included in previous reviews were identified and also summarized.

As in previous reviews, barriers to breast and cervical cancer screening and programs that promote the use of mammograms and Pap tests are the focus of this document. Articles on breast and cervical cancer risk factors, screening outcomes (stage of diagnosis), and treatment are not included.

The document is divided into seven profiles: the Female Population as a Whole; Low Income Women; African-American Women; Hispanic Women; Native American Women; Women over 50; and Physicians. Each profile discusses barriers to screening and includes short descriptions of programs designed to increase screening utilization. Implications that may be useful to program planners that have been derived from the articles are also included. These implications are not intended to be a complete list but rather a supplement to those listed in previous literature reviews and reported in reviewed journal articles.

Profile categories are modified each year based on the focus of the articles written during the specified time frame. All but three of the categories included in last year's literature review have been modified or omitted. The three categories that have remained the same are: Female Population as a Whole, Native American Women, and Physicians. Categories that have been omitted due to lack of relevant articles published during this time frame are: Middle and Upper Income Women and Asian American Women. The description "low income" has been removed from the profile titles for African-American and Hispanic Women since the articles addressing the needs of these ethnic minority groups did not solely focus on low income subgroups. A separate category entitled "Low Income Women" has been added to include those articles examining low income level as a primary demographic variable. Finally, the category of "Older Women" has been changed to "Women Over 50."

This literature review builds upon the three previous reviews. Investigators often report different aspects of their research in various articles over a period of several years. Therefore, different components of the same program may be described in one or more of these reviews. Similarly, there may be more information on specific barriers of interest reported in previous reviews.

### *How to use this document*

This literature review is intended to be a resource and starting point for program planners. While these reviews provide an overview of

## INTRODUCTION

### *Notes*

relevant issues, program planners are encouraged to consult the original articles for details of reported programs and studies. The summaries are intended to direct program planners to the appropriate resources, rather than to substitute for them.

The categories in the document are not mutually exclusive. Many times a particular article may contain information relevant to more than one of the population categories. Each article is reported only once. Please keep this in mind when using this document to assist in your research.

## FEMALE POPULATION AS A WHOLE

### Notes

### Background

Pap smears and mammograms have proven to be effective in detecting cancer early and reducing the number of early deaths among women. Despite the efficacy of these screening tests, not all eligible women are being screened. The medical and public health communities have been most successful in reaching educated, white and middle to upper income women with screening services. However, screening rates for the female population as a whole remain well below goals set in the Healthy People 2000 objectives. (See Tables 1 and 2 that follow.) This is especially true for women of color and women with lower education levels. Innovative programs must continue to be developed and evaluated in order to increase screening rates on a wider scale.

<b>Objective 16.11</b> Increase the baseline percentage of women who have received a <b>clinical breast exam and mammogram</b> to the Year 2000 target for women in the following categories.	<b>1987 Baseline</b>	<b>2000 Target</b>
<i><b>Ever Received-</b></i>		
Women 40 and older	36%	80%
Hispanic women aged 40 and older	20%	80%
Low-income women aged 40 and older (annual family income < \$10,000)	22%	80%
Women aged 40 and older with less than high school education	23%	80%
Women aged 70 and older	25%	80%
Black women aged 40 and older	28%	80%
<i><b>Received Within Preceding 2 years-</b></i>		
Women 50 and older	25%	60%
Hispanic women aged 50 and older	18%	60%
Low-income women aged 50 and older (annual family income < \$10,000)	15%	60%
Women aged 50 and older with less than high school education	16%	60%
Women aged 70 and older	18%	60%
Black women aged 50 and older	19%	60%

**Table 1: Healthy People 2000 - Objective 16.11**  
(U.S. Department of Health and Human Services, Public Health Service, 1990)

## FEMALE POPULATION AS A WHOLE

Notes

Objective 16.12 Increase the baseline percentage of women* who have received a Pap test to the Year 2000 target for women* in the following categories.	1987 Baseline	2000 Target
<i>Ever Received -</i>		
Women aged 18 and older	88%	95%
Hispanic women aged 18 and older	75%	95%
Women aged 70 and older	76%	95%
Women aged 18 and older with less than high school education	79%	95%
Low-income women aged 18 and older (annual family income < \$10,000)	80%	95%
<i>Received Within Preceding 3 Years -</i>		
Women aged 18 and older	75%	85%
Hispanic Women aged 18 and older	66%	80%
Women aged 70 and older	44%	70%
Women aged 18 and older with less than high school education	58%	75%
Low income women aged 18 and older (annual family income < \$10,000)	64%	80%

**TABLE 2: Healthy People 2000 - Object 16.12**  
(U.S. Department of Health and Human Services, Public Health Service, 1990)  
\* Women with uterine cervix.

### Mammography

#### Barriers

Despite increased publicity and a greater emphasis on breast cancer screening, a lack of knowledge about mammography continues to be a barrier to women obtaining mammograms (Kurtz et al., 1993; Munn, 1993; Roetzheim et al., 1993). While many women know about mammography, they do not feel that they need to be screened (Munn, 1993; Breen and Kessler, 1994). Asymptomatic women in particular retain this belief (Breen and Kessler, 1994; Bastani et al., 1993).

A woman's connection to the medical system also affects whether or not she obtains a mammogram. Studies show that women who see a gynecologist for regular Pap smears are more likely to have had a mammogram (Rakowski et al., 1993; Urban et al., 1994; Kurtz et al.,

## FEMALE POPULATION AS A WHOLE

### *Notes*

1994; Sutton et al., 1994). Research also indicates that women who do not have a regular source of health care are less likely to be screened (Rakowski et al., 1993; Urban et al., 1994).

Lack of a physician recommendation remains a significant barrier for screening (Breen and Kessler, 1994; Vogel et al., 1993; Bastani et al., 1994; Munn, 1993; Roetzheim et al., 1993). In a survey conducted by Roetzheim and colleagues (1993), women of color indicated more often that their physician influenced their participation in screening whereas white women indicated that low cost and project publicity were most influential.

There are many fears associated with breast cancer screening and all affect mammography usage rates. Finding cancer remains a major fear for many women (Bastani et al., 1994; Munn, 1993). Fear of the mammogram itself was noted among older women and women of color in a study by Roetzheim and colleagues (1993). Concern over radiation exposure was reported in a study by Bastani and colleagues (1994). Breen and Kessler (1994) also report fear as a barrier.

Cost is cited as a barrier to screening by a number of researchers (Breen and Kessler, 1994; Bastani et al., 1994; Roetzheim et al., 1993; Vogel et al., 1994). A higher income level is associated with higher use of mammography (Urban et al., 1994; Breen and Kessler, 1994). Additionally, lack of time is a barrier for women, especially younger women (Roetzheim et al., 1993). Other similar barriers include inconvenience (Bastani et al., 1994) and living more than 45 minutes from a screening site (Taplin et al., 1994). Munn (1993) found lack of concern and apathy to be barriers to screening. Kurtz and colleagues (1993) found that women who do not go in for screening often have a lesser desire for control over health.

Researchers have documented factors that predict or facilitate breast cancer screening. A higher level of education is positively associated with obtaining mammograms (Breen and Kessler, 1994; Lerman et al., 1993; Sienko et al., 1993). A study by Lerman and colleagues (1994) suggests that women with more education are also more likely to participate in breast cancer education programs. Having a had a previous mammogram made it more likely that a woman would obtain subsequent mammograms (Taplin et al., 1994). Perceived importance of regular cervical and breast cancer screening and the belief in the efficacy of screening also makes it more likely that a woman will be screened (Sutton et al., 1994). Age is also a factor in whether a woman is likely to have a mammogram. A study by Urban and colleagues (1994) found that younger women are more likely to be screened than older women. Another study found that the ratio of observed to expected mammograms was highest among women ages 35-39 and declined progressively with increased age (Sienko et al., 1993). Women with family members affected by breast cancer are more likely to have had mammograms and to be in compliance with screening guidelines than women with no family

## FEMALE POPULATION AS A WHOLE

### *Notes*

history (Lerman et al., 1993; Urban et al., 1994). A person's interpersonal network can also have a positive impact on screening rates (Johnson and Meischke, 1993). Where a woman lives has also been found to be associated with mammography usage. Two studies found that women living in metro areas were more likely to be screened than women outside metro areas (Breen and Kessler, 1994; Rakowski et al., 1993). Studies by Rakowski and colleagues (1993) and Urban and colleagues (1994) reported that women who smoke were less likely to have been screened.

Using the 1990 National Health Interview Survey of Health Promotion and Disease Prevention, the status of mammography use among women ages 40-75 was explored (Rakowski et al., 1993). In this study, mammography status was examined based on four areas: ever having a mammogram, number of prior mammograms, most recent mammogram, and intention to have future mammograms. Additionally, the following categories of variables were considered when analyzing the data: demographics and health status, resources and education, screening practices and other health behaviors, household composition, and setting. Results of the study indicated that 57.7 percent of women "ever had" a mammogram, 50.3 percent of those women had a mammogram in the previous 2 years. Only 28.6 percent of the women adhered to age-specific screening guidelines and expressed an intention to continue doing so. Thirty percent of the women indicated no intention to obtain a mammogram in the near future. Factors related to lower rates of mammography screening include: less recent clinical breast examine and Pap test, no regular source of health care, being a smoker, not exercising regularly, being unaware of breast self exam, living in a mobile home or trailer park, not living in the western region of the United States, having three or more people in a household, and not living in a standard metropolitan statistical area. Women of color, women with less education and lower incomes had lower screening rates.

### *Programs*

In an intervention conducted by Kurtz and colleagues, women ages 35-65 employed at various work sites were mailed three breast cancer screening brochures published by the American Cancer Society. Information on mammography locations, hours, and costs was included in the mailing with recommendations to contact their primary health care provider. Results of pre- and post-tests indicated an increased perception of the importance of clinical breast examination and regular mammograms, an increase in discussion at work of breast cancer screening, and a decrease in the perception that mammography is an uncomfortable procedure. (Kurtz et al., 1993)

The Group Health Cooperative of Puget Sound conducted a trial to evaluate methods of increasing the use of screening mammography. The study population included women ages 50-79 who were current Group



## FEMALE POPULATION AS A WHOLE

### *Notes*

Health Cooperative enrollees who had completed a health questionnaire, but had not been previously invited to a screening center or had a mammogram in the last year. The women were randomly assigned to four groups: 1) those receiving a personal invitation from their primary care physician recommending mammography, 2) those receiving a reminder postcard for mammography, 3) those receiving a personal invitation and a reminder postcard, 4) and those receiving usual care, a letter signed by the Breast Screening Program medical director recommending a mammogram at one of the screening centers. The results indicated that sending the reminder postcard increased the likelihood of getting a mammogram by at least sixty percent. A personal invitation from the women's primary physician did not increase participation. (Taplin et al., 1994)

In North Carolina, 497 patients from two family practice groups were enrolled in a study to determine whether tailored letters from physicians recommending mammography were more effective than standardized letters. Women ages 40 through 65 were interviewed by telephone to obtain baseline screening information and randomly selected to receive individually tailored or standardized letters. The standardized letters delivered a general message regarding mammography, whereas the tailored letters addressed individual beliefs, barriers to mammography, breast cancer risk, and screening status. Second telephone interviews were conducted three months after the letters were sent. Results revealed that women receiving the individualized letters were more likely to remember them and have read more of the contents than were women receiving the standardized letters. Well-educated women were more likely to recall receiving a letter, but reported less interest in the contents. Women with incomes below \$26,000 and Black women who received the tailored letters were positively influenced to obtain mammograms. (Skinner et al., 1994)

One hundred and fifty women ages 36-80 who were due for a repeat screening mammogram at a medical center in the southeastern United States were sent one of three letters reminding them to schedule an appointment. The letters sent to the women were either reassuring, anxiety provoking, or the standard hospital reminder. Letters were received by the subjects just before the month that the repeat mammogram was due. Data collected on the subjects included the number of women from each of the three groups who scheduled an appointment within 30 days of receiving a letter, and the number of women from each group who kept their appointments. Results indicated no significant difference among the three groups in regards to scheduling appointments. However, compared to women receiving the standardized letter, significantly more women who received the reassuring letter kept their appointments. Further analyses suggested that important factors in scheduling appointments include a family history of breast cancer, receiving a reassuring letter, and being older than 50 years. (Kendall and Hailey, 1993)

## FEMALE POPULATION AS A WHOLE

### *Notes*

A health maintenance organization's (HMO) breast screening program evaluated the effectiveness of interventions designed to prompt women 50 to 74 years of age to obtain a free annual mammogram offered by the HMO. The three step intervention began with a breast cancer information packet which included a free mammogram referral that was mailed to 4250 women. Radiology reports were reviewed to ascertain mammography use, and women eligible for subsequent interventions were identified. The remaining eligible women who had not obtained a mammogram in response to the packet were divided into step two and step three intervention groups. In step two, 1524 women were randomized into either the reminder or no-reminder group. Those in the reminder group were mailed a reminder letter. Of the women assigned to the step three intervention group, 1710 received the step two reminder because no mammogram had been obtained after 45 days. Ninety days after the initial packet, those women in the step three group who still had not received a mammogram were randomized into one of three interventions. The three intervention groups included those receiving a second reminder letter, those receiving a letter urging a primary care checkup, and those receiving telephone counseling. In the step two evaluation, 42% of the reminder group and 28% of the no-reminder group received mammograms within 46 to 95 days after the initial packet. Of this group, women with more than a high school education were more likely to have a mammogram, as were married women. In the step three evaluation, 29% of the telephone counseling group, 14% of checkup letter group and 12% of the second reminder group received mammograms. (King et al., 1994)

In Los Angeles County a random sample of 802 women over 40 years of age participated in a pretest post-test study designed to evaluate the effectiveness of a mail-out intervention for increasing screening mammography rates. After having completed the baseline telephone survey, 802 women were randomly assigned to either the intervention or control group. The intervention group received materials encouraging mammogram screening, while the control group received general cancer-related material. One year after the baseline survey, 78% of the women were successfully re-surveyed by telephone to determine whether or not the intervention was effective. The results indicated no significant difference in the subsequent screening rates of the intervention and control groups. (Bastani et al., 1994)

In a large Midwestern metropolitan area, 301 women ages 35 to 88 participated in a longitudinal study designed to increase breast cancer screening rates. Participants completed a baseline survey then were randomly assigned to one of four groups: a control group, a belief intervention group, an informational intervention group, and a belief/informational intervention group. An initial in-home visit was conducted by trained graduate nurse research assistants approximately six weeks after the baseline survey was obtained. Data were collected for belief variables, mammography history, demographic and experiential variables. All women, with the exception of the control group, received

## FEMALE POPULATION AS A WHOLE

### Notes

appropriate interventions based on their assigned group. Participants in the intervention groups received messages individually tailored to their beliefs based on information from the baseline survey, and/or provider information related to mammography screening. One year later, in-home interviews were conducted. Results showed that the belief intervention messages, based on the Health Belief Model, significantly influenced all belief variables with the exception of perceived susceptibility. Mammography compliance was most significantly increased among women in the belief/informational group who were almost four times more likely to comply post intervention than were women in the control group. (Champion, 1994)

In a joint effort to educate women ages 18 to 39 on the practice of breast self-examination and other health behaviors that can reduce breast cancer incidence and mortality, Glamour Magazine and Hanes Hosiery developed an educational program called "Hand in Hand". Breast self-examination technique cards and other health information have been included in 30 million Hanes Hosiery packages, and brochures and booklets have been distributed on colleges campuses, in health clubs, doctors office's, and day care centers. Younger women have been targeted in an effort to influence good health behaviors early in life and to encourage older family members to do the same. (*Prim Care & Cancer*, 1994)

Of women 35 years of age and older who have a first-degree relative with breast cancer, 271 participated in a study to determine factors that facilitate or hinder participation in a breast cancer health promotion trial. The subjects, who were all eligible to participate in the randomized trial, completed a telephone survey that addressed sociodemographic factors, breast cancer risk factors and screening practices, and psychological and emotional factors. An analysis of the data showed that education was a key determinant of the importance of these factors on participation in the breast cancer education trial. Women with a high school education or less were more likely to participate if the diagnosis of their relative had significantly impacted their perception of personal risk. Women with more than a high school education, however, were influenced by having a greater number of family members with breast cancer, not having had a breast biopsy, and practicing breast self-examination. Women with less education were less likely to participate in the trial if they were unemployed; whereas unemployment facilitated participation by women who were more educated. (Lerman et al., 1993)

In spring of 1990, a Breast Cancer Detection and Awareness Project was conducted by District IV of the Florida Division of the American Cancer Society and a local television station. The television sponsor broadcast a one week informational series on breast cancer and mammography screening. During this week, phone banks were staffed from noon until midnight. Women who contacted the phone bank were sent an information packet that included a questionnaire soliciting demographic information, reasons for participating, and their attitudes

## FEMALE POPULATION AS A WHOLE

### *Notes*

toward breast cancer screening. Women between the ages of 35-39 were eligible to participate in the project if they had not had a prior mammogram, and women 40 and over were eligible if they had not obtained a mammogram in the past two years. Participants paid \$45 for mammograms offered by 69 facilities in the area. At the time of their mammogram, participants returned their completed surveys. Of the 13,215 eligible women who called the phone bank, 6640 obtained a mammogram and completed the survey. (Roetzheim et al., 1993)

In five clinical sites serving inner-city women in Detroit, Michigan (two health department sites, two private hospital sites, one HMO site), a one year randomized controlled trial was conducted to evaluate the effectiveness of a computerized mammography reminder system. Four thousand four hundred and one women aged 40 and older who were eligible to participate in the study were randomly assigned to one of two groups: limited intervention vs. full intervention. The limited intervention included physician and staff breast cancer control education and elimination of out-of-pocket expenses for mammography. The full intervention included all aspects of the limited intervention plus physician referral reminders in patient medical records, a postcard reminder to patients to schedule a mammogram, and a rescheduling system for women who failed to attend their mammography appointment. Results of the study found that rates of mammography appointments for women in the limited intervention group varied from 11% to 37% across the five sites, whereas for the full intervention group the rates varied between 38% to 65%. The follow-up postcard proved to have a significant effect at only one of the sites, and mammography rates at all of the sites were significantly increased by the full intervention. (Burack et al., 1994)

## **Pap Smears**

### *Barriers*

Many of the barriers to obtaining a Pap smear are similar to those which keep women from obtaining mammograms. Fear and embarrassment are barriers cited in a study by McKie (1993). Murray and McMillan (1993) report that many women believe that Pap smears are not necessary for women their age and that younger women are more likely to have Pap smears than older women. One study found that women between the ages of 45-54 were more likely to go in for Pap smears than women ages 55-74 (Klassen et al., 1993). Language and cultural barriers also keep women from being screened (Ghazal et al., 1993).

A woman is more likely to go for a Pap smear if symptoms are present and if there is social pressure on her to go (McKie, 1993). Klassen and colleagues (1993) report that frequent contact with health

## FEMALE POPULATION AS A WHOLE

### *Notes*

providers is positively related to having a Pap smear. Hospitalization however, does not increase the likelihood of having had a recent Pap smear.

### *Programs*

In Fitzroy Valley, in the Kimberly region of Australia, a Pap smear register that monitored the prevalence of cervical abnormalities in screened women was also used to establish a call and recall system for cervical screening among Aboriginal women. The call/recall method proven effective was a verbal reminder by the community health staff. Reminder letters and pamphlets were mailed only to the literate women who failed to respond to a verbal reminder. The register was developed by identifying women through hospital and community health records between the ages of 15 to 69 who had ever been sexually active. In 1990, 507 women, 86.9% of the target population, were listed in the register. In that same year, 53.6% of the target population was screened. Of those screened, 24.3% had not previously obtained a cervical screen. Pap smears were offered every two weeks in the local community clinic, but were also provided in off-site settings such as homes, offices and schools. (Mak and Straton, 1993)

In Australia, a new national policy on cervical screening will give the country one of the most comprehensive cervical cancer prevention programs. This new approach will educate women and health care providers on the benefits of Pap smears, encourage regular Pap smears, provide screening services in traditionally underserved areas, establish quality assurance measures, establish treatment protocols, and institute a reminder system when Pap smears are overdue. The new national policy recommends that women with no symptoms nor a history of cancer be screened every two years, women who are sexually active initiate screening at ages 18 to 20 or within a year or two of first sexual intercourse, and that Pap smears cease at age 70 if a woman has had two normal smears in the last 5 years. (Coxhead, 1993)

In New Zealand, the National Cervical Screening Programme was established in 1993 to reduce the incidence and mortality associated with cervical cancer. This program was designed to be coordinated nationally but implemented by local health boards. In Auckland, the Auckland Area Health Board divided the region into four districts whose primary objective was to educate unscreened women in the target groups. Lay educators who provided community outreach to target groups were trained in the use of Cervical Screening Kits that included a video on screening, a flip chart, an anatomical model, and samples of equipment used when taking a Pap smear. Culturally appropriate educational and resource materials were available in various local languages, and educational sessions were evaluated by both the consumer and the educator. Providing education in the workplace before work, and at coffee and lunch breaks, proved to be successful. In an effort to support initiatives

## FEMALE POPULATION AS A WHOLE

### *Notes*

by General Practitioners to extend services to the unscreened women, program strategies included health education brochures, practice nurse support, clerical assistance and subsidized cervical smears. A final evaluation showed that a personalized invitation to women from general practices is the most important factor influencing women's participation in cervical screening. (Fleischl, 1993)

### **Mammography and Pap Smears**

#### *Programs*

In Rhode Island, a large group of health organizations are working together with the Providence Ambulatory Health Care Foundation (PAHCF) to increase rates of breast and cervical cancer screening among its female population over 40 years of age. The project's seven part strategy includes: baseline surveillance on women's cancer screening, in-service training for screening staff, preliminary interventions to increase screening practices among target groups, a focus group to identify barriers, reduction of barriers, evaluation of interventions, and a media campaign at the five PAHCF clinics. The preliminary interventions include a medical charts reminder system; scheduling of cervical exams in PAHCF clinics and free off-site mammograms; referrals, promotional patient posters, and brochures; and a patient mail reminder being tested by one of the five clinics. Since the project's inception, more than one out of every ten eligible women have obtained a mammogram. Similar progress has been made for cervical screening. (Ghazal et al., 1993)

The Wisconsin Women's Cancer Control Program's goal is to reduce mortality from breast and cervical cancer. Through a five year grant awarded by the Centers for Disease Control and Prevention in fall of 1993, the Wisconsin Department of Health will further develop and implement a program that includes the following components: coalition building, public education, professional education, service delivery, quality assurance, surveillance, and evaluation. The target audience will be women 40 years and older, especially those who are economically disadvantaged, ethnic minorities, uninsured or under-insured, and those living in areas of the state with limited access to screening and treatment services. (Remington et al., 1994)

## FEMALE POPULATION AS A WHOLE

### Notes

#### IMPLICATIONS FOR PROGRAM PLANNERS

The elimination of cost as a barrier to obtaining a mammogram is an incomplete intervention. A physician referral reminder and patient reminders can be effective added strategies for increasing mammography use in addition to removal of the cost barrier. (Burack et al., 1994)

Tailored letters may influence women to seek mammography. However, they may not provide the skills and information needed to negotiate the medical system to access mammogram services. (Skinner et al., 1994)

Promotion and awareness campaigns for breast and cervical cancer screening should target relevant attitudes and beliefs. In addition to invitations and educational brochures, health care providers should target women through their routine contact with patients.

Personal contact, sensitivity to social context, development of trust and the consistency and continuity of service provision have proven effective to overcome barriers to screening. (Mak and Straton, 1993)

Efforts to reach targeted demographic groups for breast cancer screening will require a multifaceted intervention that addresses various barriers.

#### CITATIONS

- Bastani R, Marcus AC, Maxwell AE, Das IP, Yan KX. *Evaluation of an intervention to increase mammography screening in Los Angeles. Prev Med* 1994; 23:83-90.
- Breen N, Kessler L. *Changes in the use of screening mammography: Evidence from the 1987 and 1990 National Health Interview Surveys. Am J Public Health* 1994; 84(1):62-67.
- Burack RC, Gimotty PA, George J, Stengle W, Warbasse L, Moncrease A. *Promoting screening mammography in inner-city settings: A randomized controlled trial of computerized reminders as a component of a program to facilitate mammography. Med Care* 1994; 32:609-624.
- Business fosters breast cancer programs [article]. Prim Care & Cancer* 1994; 14(1):42.
- Champion VL. *Strategies to increase mammography utilization. Med Care* 1994; 32:118-129.
- Coxhead J. *Cervical Cancer. Lamp* 1993; 50(2):26.
- Fleischl J. *Lessons from a cervical screening programme: Are they transferable? Nursing Praxis in NZ* 1993; 8(2):34-37.

## FEMALE POPULATION AS A WHOLE

### Notes

- Ghazal M, Tetu-Mouradjian LM, Jones A, Block SH. *Inner-city breast and cervical cancer screening: A cooperative report. RI Med J* 1993; 76:195-198.
- Johnson JD, Meischke H. *Cancer-related channel selection: An extension for a sample of women who have had a mammogram. Women Health* 1993; 20(2):31-44.
- Kendall C, Hailey BJ. *The relative effectiveness of three reminder letters on making and keeping mammogram appointments. Behav Med* 1993; 19:29-34.
- King ES, Rimer BK, Seay J, Balshem A, Engstrom PF. *Promoting mammography use through progressive interventions: Is it effective? Am J Public Health* 1994; 84(1):104-106.
- Klassen AC, Celentano DD, Weisman CS. *Cervical cancer screening in hospitals: The efficacy of legislation in Maryland. Am J Public Health* 1993; 83:1316-1320.
- Kurtz ME, Given B, Given CW, Kurtz JC. *Relationships of barriers and facilitators to breast self-examination, mammography, and clinical breast examinations in a worksite population. Cancer Nurs* 1993; 16(4):251-259.
- Kurtz ME, Kurtz JC, Given B, Given CW. *Promotion of breast cancer screening in a worksite population. Health Care for Women International* 1994; 15:31-42.
- Lerman C, Daly M, Sands C, et. al. *Mammography adherence and psychological distress among women at risk for breast cancer. J Natl Cancer Inst* 1993; 85:1074-1080.
- Lerman C, Rimer BK, Daly M, et. al. *Recruiting high risk women into a breast cancer health promotion trial. Cancer Epidemiol Biomarkers Prev* 1994; 3:271-276.
- Mak DB and Straton JAY. *The Fitzroy Valley Pap smear register. Med J Aust* 1993; 158:163-166.
- McKie L. *Women's views of the cervical smear test: Implications for nursing practice - women who have not had a smear test. J Adv Nurs* 1993; 18:972-979.
- Munn E. *Nonparticipation in mammography screening: Apathy, anxiety or cost? NZ Med J* 1993; 106:284-286.
- Murray M and McMillan C. *Social and behavioural predictors of women's cancer screening practices in Northern Ireland. J Public Health Med* 1993; 15(2):147-153.
- Rakowski W, Rimer BK, Bryant SA. *Integrating behavior and intention regarding mammography by respondents in the 1990 National Health Interview Survey of Health Promotion and Disease Prevention. Public Health Rep* 1993; 108(5):605-624.
- Remington PL, Haskins L, Zvara J, et al. *The Wisconsin Women's Cancer Control Program. Wis Med J* 1994; 93(1):21-24, 26.
- Roetzheim RG, Van Durme DJ, Brownlee HJ, Herold AH, Woodard LJ, Blair C. *Barriers to screening among participants of a media-promoted breast cancer screening project. Cancer Detect Prev* 1993; 17(3):367-377.



## FEMALE POPULATION AS A WHOLE

### Notes

- Sienko DG, Hahn RA, Mills EM, Yoon-DeLong V, et. al. Mammography use and outcomes in a community: The Greater Lansing area mammography study. *Cancer* 1993; 71:1801-1809.
- Skinner CS, Strecher VJ, Hospers H. Physicians' recommendations for mammography: Do tailored messages make a difference? *Am J Public Health* 1994; 84(1):43-49.
- Sutton S, Bickler G, Sancho-Aldridge J, Saidi G. Prospective study of predictors of attendance for breast screening in inner London. *J Epidemiol Community Health* 1994; 48:65-73.
- Taplin SH, Anderman C, Grothaus L, Curry S, Montano D. Using physician correspondence and postcard reminders to promote mammography use. *Am J Public Health* 1994; 84(4):571-574.
- Urban N, Anderson GL, Peacock S. Mammography screening: How important is cost as a barrier to use? *Am J Public Health* 1994; 84(1):50-55.
- U.S. Department of Health and Human Services, Public Health Service. *Healthy People 2000: National Health Objectives: Women*. September 1990. Available from U.S. Department of Health and Human Services, Public Health Service, Washington, DC.
- Vogel VG, Bondy M, Halabi S, Lord J, LaVille EA. The Texas Breast Screening Project: Part II. Demographics, risk profiles, and health practices of participants. *South Med J* 1993; 86(4):391-396.

**Background**

Economic disadvantage is a risk factor for nearly all chronic diseases, including cancer. According to recent national statistics, the incidence of cancer increases as family income decreases (Underwood et al., 1994). Five-year survival rates and mortality rates are also negatively affected by low income levels (Underwood et al., 1994). Utilization of mammography for screening and diagnosis is significantly lower for women in lower socioeconomic groups than for the rest of the female population (Harper, 1993).

**Mammography****Barriers**

In 1992, a study of breast health was conducted by the Wirthlin Group for the American Cancer Society. Fear of finding cancer was a major barrier for all women regardless of their income status. The top three barriers for low income women were: fear of finding cancer, lack of physician recommendation and not knowing when to go for a mammogram. Cost was an important issue when the data was stratified by ethnic background. Cost was one of the most important barriers for Black and Hispanic women over the age of 50 with incomes of less than \$20,000. Secondary barriers for low income Black and Hispanic women included: may have to travel, time involved, may be painful, family/friends don't urge you, don't know what to expect, embarrassing. It is important to analyze these barriers in order to develop programs to meet the specific needs of low income women. (Harper, 1993)

During May and June, 1989, the American Cancer Society (ACS) sponsored a series of hearings across the United States to document the unmet cancer control and prevention needs of poor Americans. Underwood and colleagues analyzed the testimony of 46 economically disadvantaged individuals that had personal experiences with cancer to look for themes and obstacles to cancer care. Six major obstacles to care were identified: care was deferred because of high cost; care was described as fragmented and impersonal; patients with symptoms were told not to worry about changes in their bodies; patients were discouraged from looking for state-of-the-art care; poor patients found it difficult to communicate their needs and concerns; poverty interfered in their efforts to participate in volunteer activities to help others with cancer. Diagnostic, treatment, and rehabilitative services need to be expanded and extended to the poor. Education and prevention need to be facilitated and further research must be done to expand the understanding of the scope of the problem. (Underwood et al., 1994)

## Programs

In October 1989, the American Cancer Society funded three Community Cancer Detection, Education and Prevention Demonstration Projects. Targeting underserved and socioeconomically disadvantaged populations, these projects were implemented in Miami, Harlem and West Oakland. The Miami project involved a mass screening model with a focus on breast and cervical cancer screening. Between 1990 and 1992, the preliminary data show a significant increase in the number of women diagnosed at the in situ and local stages of breast cancer. The Harlem project providing screening for breast, cervical, colorectal and prostate cancers, used a patient navigator model that helped individuals overcome barriers. The project has provided 259 patient navigator services and is currently being evaluated. The West Oakland project used a primary care model that included comprehensive risk assessment, education and risk reduction, and multisite early detection and screening. This project screened for breast, cervical, colorectal, oral, skin, prostate, and vaginal cancers. A program evaluation has shown a significant increase in cancer knowledge among those participating in the program. (Black and Ades, 1994)

**Note:** Few articles describing programs specifically targeting low income women, regardless of race or ethnicity, were found in the literature published between June, 1993 and May, 1994. However, income status is addressed in some of the programs targeting a specific ethnic or racial group. Descriptions of these programs can be found in their respective sections in this review.

### IMPLICATIONS FOR PROGRAM PLANNERS

Cost of screening is considered a major barrier by many low income women.

Barriers to screening for low income women may vary depending on ethnic background.

Educational messages should be kept simple.

Programs should emphasize an individual's ability to affect health through action.

Past negative experiences with the health care delivery system may inhibit low income women from coming in for screening.

## Pap Smears

No articles on studies or programs regarding Pap smear screening that specifically target Low Income women were published during this period.

## LOW INCOME WOMEN

*Notes*

## CITATIONS

- Black BL and Ades TB. American Cancer Society urban demonstration projects: Models for successful intervention. Semin Oncol Nurs 1994; 10(2):96-103.*
- Harper AP. Mammography utilization in the poor and medically underserved. Cancer 1993; 72(4):1478-82.*
- Underwood SM, Hoskins D, Cummins T, Morris K, Williams A. Obstacles to cancer care: Focus on the economically disadvantaged. Oncol Nurs Forum 1994; 21(1): 47-52.*

### ***Background***

African American women with breast cancer have a 13% lower survival rate than do white women due in large part to later diagnosis. Among poor Black women the rates are even lower than for Black women as a whole (Bressler et al., 1993). When compared with women as a whole, survival rates for breast and cervical cancer are lower among low-income women and specifically among low-income Black women. Low-income Black women rely to a greater extent than women in general upon providers in publicly funded institutions or over-burdened private practices for their health care. African American women are more likely to come in for acute or chronic problems than for health maintenance issues. This makes it less likely that an African American woman will be screened and more likely that her disease will be diagnosed at a later stage (Lacey et al., 1993).

### **Mammography**

#### ***Barriers***

Face to face interviews with 670 randomly selected African American women were conducted in Oakland and San Francisco to look at the relationship between social support and the use of mammography, Pap smears and clinical breast exam (Kang et al., 1994). The Berkman and Syme's Social Network Index which looks at variables like marital status, number of relatives and friends, church participation and participation in other organizations was used as one measure of social support. The study found that African American women with more social ties were more likely to have had a routine mammogram after other variables like health status, age, type of health insurance, and having a primary care source were controlled. The study concludes that social networks may be important not only in encouraging an initial test but in encouraging follow through with other scheduled appointments and following doctors recommendations. Interventions involving social ties may have a role in promoting early cancer detection.

Tessaro and colleagues (1994) conducted a study to gain a better understanding of cultural factors that influence the screening behavior of older African American women. Data for this study were collected in conjunction with the New Hanover Breast Screening Program. This program was one of six demonstration projects funded by the National Cancer Institute. The program tried a two-tiered approach aimed at primary care physicians and women aged 50-74. Media and community campaigns focused on three messages: 1) breast screening should include a clinical breast exam and a mammogram, 2) screening is especially important for women older than 50, and 3) to get a screening, call your doctor. Data from the study show an increased racial gap in the numbers of women obtaining mammograms after the campaign as compared with prior to it. Post intervention surveys of 85 African American women

showed that the following barriers to screening remained: many women perceived their risk of breast cancer to be low, few worried about breast cancer, and the majority did not recognize age or family history as major risk factors for breast cancer. More than half the women felt that breast self exam and clinical breast exam were better than mammography to detect breast cancer. Of those who had a mammogram, almost 75% said it was the doctor's idea. More white women than African American women took advantage of low-cost mammography offers.

In response to these findings Tessaro and her colleagues conducted focus group interviews to gain a better understanding of the program's results. Interviews took place with 132 older African American women in familiar settings such as a church. Women were asked about perceived risk of breast cancer, screening intentions, health seeking behavior and social support. The focus groups found that older African American women are more concerned about other illnesses than they are about breast cancer; do not recognize age as a risk factor for breast cancer; rely on breast self exam over mammography as a means of finding breast problems; fear finding cancer; find the social consequences of losing a breast or hair are bigger barriers than fear of pain or radiation from mammography; view cost as more an issue of competing financial priorities than a barrier in itself; see a doctor for a problem not for prevention; turn to other women in their social networks for health concerns. The data suggest that the use of naturally existing sources of support should be used in intervention design to increase breast cancer screening.

### *Programs*

During this review period two articles were published describing different aspects of one program implemented in Cook County, Illinois specifically targeting low income African American women. In this review summary, this program is described using information derived from both articles. Evaluation results are summarized separately. A third article by Bressler and colleagues (1993) was also published during this time period.

In 1989 an eighteen month intervention was initiated to increase breast and cervical screening among low income African American women in Chicago, Illinois. The program addressed such issues as: accessibility to screening, knowledge about breast and cervical cancer, adherence and access to follow-up screening exams and treatment. Culturally sensitive nurses were trained on-site for twelve weeks and a quality assurance program was established to assure high quality care. The project recruited women from the general medicine clinic, beauty parlors, churches and other sites in the community. Women taking part in the program took a pre-test on their knowledge and beliefs about breast and cervical cancer, and received a physical exam including a Pap test and a mammogram, if indicated. The women's names and other vital

## AFRICAN AMERICAN WOMEN

### Notes

information were entered into a computer for tracking purposes. Participating women also took part in a classroom style presentation about the importance of breast cancer screening and were shown how to do a breast self exam. (Ansell et al., 1994 and Lacey et al., 1993)

Computer generated reminder letters were sent to women two weeks before a scheduled appointment and again after the appointment to inform them of their test results. For women with abnormal test results, follow up appointments were recorded in the computer and then checked within a week to be sure the appointment was kept. If women did not keep their appointments, a project nurse contacted them to determine why it was not kept and assist them in making another appointment. (Ansell et al., 1994 and Lacey et al., 1993)

Two articles were published evaluating different aspects of the project.

Ansell and colleagues (1994) reports that 86% of women who received computer generated reminders of upcoming appointments went in for an examination within two months of the reminder. More than 90% of women referred for follow up due to abnormal breast screening results kept their appointments. Results indicate that the intervention was successful in attracting a high-risk group of women, increasing women's knowledge about breast and cervical cancers, and reducing other access barriers to screening.

Lacey and colleagues (1993) also reports a high level of adherence by women referred for follow up for abnormal test results but notes that adherence rates for gynecological problems were lower than for breast problems. The authors conclude that the reminder system used in this project was successful and could be replicated in other settings reaching a similar population.

Bressler and colleagues (1993) reports the results of the first 5 years of an intervention (1984-1988) in Chicago, Illinois. (Please see the 1991-1992 literature review [Coyne et al., 1992] for a description of the intervention.) A retrospective review of the hospital cancer registry by Bressler and colleagues finds that the project did have an impact on the proportion of women who were diagnosed early. The rate of early diagnosis among the study population, however, was still found to be less than that of all African American women in Illinois. If early diagnosis rates are to improve among low income African American women, broader efforts to improve breast cancer screening are needed.

**Note:** Additional articles which described programs that included African American women as part of their target population are summarized in other sections of this document including Hispanic Women, Women Over 50, and Female Population as a Whole. Readers are encouraged to review these sections of the document.

**IMPLICATIONS FOR PROGRAM PLANNERS**

Social and community support is very important for African American women. Use of social support networks to plan and implement breast cancer prevention programs can be effective in increasing screening rates in African American women. (Tessaro et al., 1994)

Education in addition to reminders about appointments can increase screening and adherence rates.

Qualitative research methods such as focus groups are effective in gaining an understanding of women's responses to different interventions.

**Pap Smears**

No articles on studies or programs regarding Pap smear screening that specifically target African American women were published during this period.

**CITATIONS**

- Ansell D, Lacey L, Whitman S, Chen E, Phillips C. A nurse-delivered intervention to reduce barriers to breast and cervical cancer screening in Chicago inner city clinics. Public Health Rep 1994; 109(1):104-111.*
- Bressler J, Ansell D, Parker J, Dillard J, Whitman S. Breast cancer screening in an urban public hospital. Cancer 1993; 72(12):3636-3640.*
- Coyne C, Hohman K, Iwasaki P, Nelson D, Pike D. Breast and cervical screening: Barriers and use among specific populations. A review of literature prepared for public health planners. 52p. Denver, CO. 1992. AMC Cancer Research Center with funding from U.S. Centers for Disease Control Cooperative Agreement #U50/CCU806186-01.*
- Kang SH, Bloom JR, Romono PS. Cancer screening among African American women: Their use of tests and social support. Am J Public Health 1994; 84(1):101-103.*
- Lacey L, Whitfield J, DeWhite W, Ansell D, Whitman S, Chen E, Phillips C. Referral adherence in an inner city breast and cervical cancer screening program. Cancer 1993; 72(3):950-955.*
- Tessaro I, Eng E, Smith J. Breast cancer screening in older African American women: Qualitative research findings. Am J Health Promot 1994; 8(4):286-293.*



***Background***

Breast cancer is the most common cancer among Hispanic women. Hispanic women who develop breast cancer are generally diagnosed at a later, less treatable state than their Anglo counterparts. Although the incidence rate of breast cancer is lower among Hispanic women as compared to Anglo women, it is rising at a rate three times greater than that of Anglo women. (Saint-Germain and Longman, 1993)

**Mammography*****Barriers***

Polednak and colleagues (1993) in 1988 and 1989 conducted random telephone surveys among women aged 50-75 years old who had attended one of five community health centers in Suffolk County, New York. These surveys were designed to ascertain women's mammography screening rates in order to compare rates among Anglo women with rates among Hispanic women. All women in the study had access to free mammograms and had a regular source of health care. The proportion of women who reported having a mammogram in the past year did not differ between the two groups despite the lower educational level of Hispanic vs. Anglo respondents. Forty-three percent of Hispanic women and 43.7% of Anglo women reported having a mammogram. These results may reflect the importance of reducing the barriers of access to medical care and the cost of mammography. The study also showed that a lower proportion of Spanish speaking vs. English speaking women reported that a physician had recommended a mammogram in the last year. Effective educational programs are needed for both Hispanic and Anglo women on the importance of mammography as a screening procedure.

A survey was conducted by Saint-Germain and Longman (1993) with 409 Hispanic and 138 Anglo women over age 50 in Tucson, Arizona. The survey assessed knowledge and attitudes about breast cancer and breast cancer screening and screening usage. The survey showed that most women knew what breast cancer was but not how to detect it; 6.5% of Anglos and 17% of Hispanics could not name a detection method. Less than one-fourth of the sample identified the correct age range for women most at risk. Both Anglos and Hispanics incorrectly identified other risk factors for breast cancer. There were few differences in the two groups in screening usage. Both groups fell far below recommended levels of screening. The study concluded that more needs to be done to educate women over 50 that they are at a greater risk for breast cancer than younger women and to inform them of screening recommendations. Special attention needs to be paid to older Hispanic women who are not being adequately screened. Culturally relevant strategies are suggested.

Perez-Stable and colleagues (1994) conducted a cross-sectional telephone survey with 844 Latino and 510 Anglo men and women in California to assess self-reported use of cancer screening tests by members of a prepaid health plan. For women, the study looked at rates of Pap smears, clinical breast exams, mammograms, rectal examinations, fecal occult blood tests, and sigmoidoscopies. Ninety-seven point four percent of Latinas and 99.7% of Anglo women reported having at least one Pap smear. Ninety percent of the women in each group reported a Pap smear in the last three years. Eighty-seven percent of Latina and 90% of Anglo women reported a clinical breast exam within 2 years. Seventy-six percent of Latina and 85% of Anglo women over age 35 reported at least one mammogram; and 65% of Latina and 75% of Anglo women reported a mammogram within 2 years. Latina women were likely to report forgetfulness/carelessness, fear of results, embarrassment, cost and lack of transportation as reasons for not having screening tests. Less acculturated Latinas cited embarrassment and lack of transportation more often than the more acculturated Latinas. The study found a lower rate of cervical cancer screening for older Latina and Anglo women. More information materials and culturally appropriate cancer control interventions in Spanish are recommended.

Saint-Germain, Bassford, and Montano (1993) contrast the results from two different studies on barriers to breast cancer screening faced by older Hispanic women. Results from a survey study and a focus group study were compared. A survey of 199 women in the Tucson area was conducted to provide a quantitative model for women's use of breast cancer screening services. The results of this survey were compared with information results from focus groups conducted with 50 older Hispanic women. Overall, the two methods produced similar findings in what barriers women identified. The way barriers were rank ordered however differed between the survey respondents and the focus group participants. The top three most frequently mentioned barriers to breast cancer screening in the survey were: 1) doctor didn't recommend it, 2) not enough information and feeling the information did not apply to them tied for second, and 3) procrastination. The top three most frequently mentioned barriers mentioned through the focus groups were: 1) doctor didn't recommend it, 2) lack of social support, and 3) too expensive.

There are advantages and disadvantages in using either method. The article concludes that for documenting individual levels of knowledge and practice, the survey tool is more suitable. When looking at community attitudes, patterns of practice and explaining the reasons behind survey findings, the use of focus groups is better suited.

Suarez (1994) randomly selected and interviewed 450 Mexican-American women over 40 years of age in El Paso, Texas. Bilingual interviewers used a standard tool to ask questions about income, education, health insurance coverage, Pap smear and mammogram practices and questions related to assimilation and acculturation. Acculturation questions assessed adult proficiency in English; patterns of

## HISPANIC WOMEN

### *Notes*

English vs. Spanish language usage; value placed on preserving Mexican cultural origin; sex-role orientation; and interaction with "main-stream" society. The two year prevalence of Pap smear and mammogram use increased with each level of acculturation related to English proficiency and use. Once adjustments for age, income, insurance, and education were made the associations disappeared. Language can be an important factor in identifying Hispanic women in need of screening because in some cases, it can be used as a proxy measure for socio-economic status.

The study found the variable most positively related to mammography use was a strong traditional Mexican attitude toward family. The positive relation of family to mammography use may be explained by the support provided by extended family ties either through emotional well-being or shared economic resources. Effectiveness of cancer control interventions in Mexican-Americans may be increased by taking advantage of the positive influence that strong familialism can have on screening behaviors.

### *Programs*

Su Vida, Su Salud (Your Life, Your Health) is a community outreach program designed to increase participation in breast and cervical cancer screening programs by Mexican American and African American women. The strategy was developed in a research environment and then field tested through two local health departments in Corpus Christi and Galveston, Texas. The programs used the communication model in which positive role models are featured in the media and volunteers are available in the community to give positive social reinforcement. Focus groups were conducted with local Hispanic and African American women to discuss barriers to screening. Results of the focus groups were used to develop a newsletter and media campaign for the program. After 18 months the program generated numerous calls to health departments about mammograms and many screening appointments from the target population. Final evaluation had not been completed at the time the article was written. Authors concluded that local health departments are good sites for implementation of programs of this kind because of their access to high-risk populations and their capacity to permanently put into place interventions proven to be effective. This model is one that can be easily adapted by health departments because it can be implemented with limited resources and can be flexible enough to adopt to community needs. (Suarez et al., 1993)

Data from the Florida Data System for the Dade County area documented the need to reach underserved African American and Hispanic women with breast and cervical cancer prevention messages. Identified barriers to screening for Hispanic women were a great fear of cancer attributed to fatalism about the disease, language, lack of social support because of political refugee status, and a reluctance to seek preventive care due to illegal citizenship status. Information about breast

and cervical cancer was brought to African American and Hispanic women through articles in community newspapers, radio, church presentations, presentations through the Metro Dade Community Action Center, and incorporation of health messages into Head Start programs. A large portion of the African American and Hispanic communities were recruited for screening. A significant increase was found in the rates of in-situ and local stage disease for the screened women. An estimated \$9700 was saved in treatment costs per cancer. A One-Stop Breast Diagnostic Center was also set up to remove many follow-up barriers for women. Guidelines for giving educational presentations to underserved audiences are provided in the article. (Zavertnik, 1993)

A health center-based intervention by researchers from the University of Massachusetts was reported in a previous literature review (Crane, 1993). The intervention described utilized client-centered strategies, staff training and management systems strategies. Zapka and colleagues (1993) report that results of the program evaluation indicate an increase in breast cancer screening activity. Researchers attribute part of this success to the clinic's positive relationship with the target audience. The clinic is prevention-oriented, accessible to its clients, and clinic practitioners are culturally sensitive. As part of the intervention, clinic aides initiated discussions about breast cancer screening with patients, stamped medical records indicating that particular procedures had been discussed, and used a prevention services checklist. Use of provider prompts and continued attention to client education and reinforcement are recommended.

### **Pap Smears**

#### *Barriers*

Barriers specific to cervical screening were not presented in the articles reviewed. All barriers discussed were with reference to both breast and cervical screening. Fear of results, embarrassment, forgetfulness, cost and lack of transportation are cited as barriers (Perez-Stable, 1994). Lack of culturally appropriate materials or information in Spanish may also be barriers to Hispanic women being screened (Perez-Stable, 1994); (Saint-Germain and Longman, 1993).

#### *Programs*

An intervention being planned for inner-city Boston is designed to reach Black and Latina women with messages about cervical cancer. The project will hire two staff, a nurse practitioner and an outreach worker, both Latina Spanish speakers. Their roles will be to collaborate with community leaders, local women, and health care providers at the existing community health center. The project staff will be responsible for collecting information in English and Spanish and identifying and

## HISPANIC WOMEN

### Notes

recruiting community leaders to become involved. Women participants will be identified through health center in-reach strategies including identifying family members and friends who have not attended the center. Pap Awareness Parties will be held at a local woman's home with incentives provided to her to host such an event. Follow-up with each party participant to arrange a visit to the health center will take place about one month after the woman attends the event. Clinic staff will be invited to attend an open house where the project is discussed to have questions answered and gain support. The program will seek to address barriers to follow-up care for women with abnormal Pap smears. (Rudolph, 1993)

Culturally relevant videos were designed by the Los Angeles County Cancer Prevention Research Unit to address attitudinal barriers to obtaining Pap smears. The videos were developed with information derived from focus groups and used a community-based production team. Documentary style videos were created for both African American and Latina women. One of the videos was shown in an underserved Latino community in East Los Angeles. A rapid increase in the demand for screening was seen after the showing. The initial results were presented in the form of a case study and represent a spontaneous, informal evaluation of the effects the video had on the screening demand. Further, more formal evaluations are being conducted. (Yancey, 1994)

#### IMPLICATIONS FOR PROGRAM PLANNERS

Culturally relevant materials and materials in Spanish are recommended to reach Hispanic women.

More targeted outreach is needed to reach Hispanic women over 50 years of age.

Effectiveness of cancer control interventions in Mexican-Americans may be increased by taking advantage of the positive influence that strong family ties can have on screening behavior. (Suarez, 1994)

Use of targeted, culturally relevant videos may increase screening rates among Hispanic women.

#### CITATIONS

Crane L. *Breast and cervical screening: Barriers and use among specific populations. A review of literature prepared for public health planners. Supplement 2. 70p. Denver, CO. 1993. AMC Cancer Research Center with funding from U.S. Centers for Disease Control Cooperative Agreement #U50/CCU806186-03. Available from: AMC Cancer Research Center.*

- Perez-Stable EJ, Otero-Sabogal R, Sabogal F, McPhee SJ, Hiatt RA. Self-reported use of cancer screening tests among Latinos and Anglos in a prepaid health plan. Arch Intern Med 1994; 154:1073-1081.*
- Polednak A, Lane DS, Burg MA. Mammography use in Hispanic and Anglo visitors to community health centers. Health Values 1993; 17(3):42-48.*
- Rudolph A, Kahan V, Bordeu M. Cervical cancer prevention project for inner city Black and Latina women. Public Health Rep 1993; 108(2):156-160.*
- Saint-Germain MA, Bassford TL, Montano G. Surveys and focus groups in health research with older Hispanic women. Qualitative Health Research 1993; 3(3):341-367.*
- Saint-Germain MA, Longman AJ. Breast cancer screening among older Hispanic women: Knowledge, attitudes, and practices. Health Educ Q 1993; 20(4):539-553.*
- Suarez L. Pap smear and mammogram screening in Mexican-American women: The effects of acculturation. Am J Public Health 1994; 84(5):742-746.*
- Suarez L, Nichols DC, Pulley L, Brady CA, McAlister A. Local health departments implement a theory-based model to increase breast and cervical cancer screening. Public Health Rep 1993; 108(4):477-482.*
- Yancey AK, Walden L. Stimulating cancer screening among Latinas and African-American women: A community case study. J Cancer Educ 1994; 9:46-52.*
- Zapka JG, Harris DR, Hosmer D, Costanza ME, Mas E, Barth R. Effect of a community health center intervention on breast cancer screening among Hispanic American women. HSR: Health Services Research 1993; 28(2):223-235.*
- Zavertnik JJ. Strategies for reaching poor Blacks and Hispanics in Dade County, Florida. Cancer 1993; 72(Suppl):1088-1092.*

## ***Background***

Cancer in Native Americans has only recently gained the attention of cancer control researchers. Few articles therefore have been written addressing the barriers to breast and cervical cancer screening faced by Native women, and even fewer articles identifying effective screening interventions. Several factors impact the ability of investigators to conduct research among Native Americans including: cancer rates and primary sites vary by tribe and geographic region; some databases contain misclassified/faulty data on Native people; risk factors that have a negative influence in other populations may have a protective effect in some Native American communities. Studies of cervical and breast cancer screening practices of Native American women summarized in this review, have led to the identification of barriers and recommendations for future interventions.

## **Mammography**

### ***Barriers***

Lanier (1993a & b) and Joe & Young (1993) identified barriers to general cancer screening for Native American people which emerged from the second national conference on cancer in Native American Country. Although not specifically related to breast and cervical cancer screening, these barriers may impact a Native American woman's use of mammography and Pap tests. The barriers include: poverty; lack of access to cancer screening and treatment facilities; some Native American views that differ from the medical view of the epidemiology of illness, including cancer; lack of access to foods with a preventive effect for cancer and other chronic diseases; cultural "taboos" against community members having cancer; lack of a word for "cancer" in some Native languages; and barriers to cancer screening and treatment that are determined by different social, cultural, and environmental factors.

The Sioux Cancer Study conducted from 1989 through 1992 in North and South Dakota indicated that poverty and low educational levels are potential contributors to cancer mortality among Sioux living in this two state region. Study investigators recommend that income and education be considered in the development of successful cancer prevention and control programs for Native Americans. (Welty et al., 1993)

Lanier (1993a & b) identified language as a barrier to services for Alaska Natives in their studies of 1969-1988 cancer incidence data and 1984-1988 mortality data from the Alaska Native Cancer tumor registry. Gordon and colleagues also identified language as a barrier to be addressed when establishing appropriate breast and cervical cancer screening services for Yaqui Indian women (Gordon et al., 1994).

Two articles (Gordon et al., 1994 and Lanier, 1993a & b) also identified transportation as a barrier to be addressed in the Yaqui and Alaska Native communities, respectively.

The lack of culturally acceptable materials and the need for culturally relevant educational programs were identified as barriers by Kaur in her synopsis of a panel presentation at the Cancer in Indian Country conference in 1992 (Kaur, 1993). The panel suggested that women not familiar with nor willing to learn about cancer survivors in their community pose barriers to the larger community becoming knowledgeable about the benefits of screening and treatment. Similar to this barrier are the widely held myths regarding cancer; including that cancer is a communicable disease and that it is best not to become more knowledgeable about it (Kaur, 1993). These beliefs could have an effect on breast and cervical cancer screening behavior.

### *Programs*

In Hawaii, the Wai'anae Coast Cancer Control Project incorporates the concept of "Kokua," or community member support, to enhance networking and social support to provide positive linkages between Native Hawaiian women and health organizations. This program works with existing social support networks to incorporate more health-activated support groups or Kokua groups, to disseminate women's health messages, especially regarding breast and cervical cancer early detection and prevention, for women older than 18 years of age. Health workers benefit from relying on integrated family and "helper" networks to get appropriate messages out. Community members benefit by having health included in their natural interactions. Evaluation of the project will look at changes in knowledge, attitudes, and behaviors regarding breast and cervical cancer screening, changes in numbers of women screened, and community diffusion of cancer prevention messages. Process evaluation will look at the effectiveness of each of the project components. (Burhansstipanov, 1993)

### **Pap Smears**

#### *Barriers*

Few articles addressed barriers specific to cervical screening. However, one study published during this period found that transportation and its cost were a barrier. Dignan and colleagues found this in their cervical cancer prevention study with Lumbee and Cherokee Native Americans in North Carolina. They suggest that a door-to-door approach to data collection would be most appropriate in these communities due to the nature of the rural, widespread populations (Dignan et al., 1993).



## NATIVE AMERICAN WOMEN

### *Notes*

Related to the barriers of widely scattered populations and limited access to services is the lack of widespread communication options, specifically telephone communication. (Dignan et al., 1993).

### *Programs*

Investigators at the Bowman Gray School of Medicine conducted the North Carolina Native American Cervical Cancer Prevention Project which focused on the Eastern Cherokee Nation in western North Carolina and the Lumbee tribe located in Robeson County, North Carolina. The investigators adapted the Centers for Disease Control and Prevention's health risk appraisal "Finding the Way: Health Risk Appraisal for Native Americans" in order to fit the cultural relevance needs of these particular communities. Developed and tested with members of the target populations, the intervention included cervical cancer prevention education delivered in households on an individual basis by trained Lumbee and Cherokee women; information about screening and follow-up services; and further communication with women to share the results of the health risk appraisal and to encourage follow-up treatment when needed. Educational materials included a videotape and pamphlets designed and tested by community members. Subsequent contact to enhance the educational message was made available by telephone and mailings. Evaluation includes pre- and post-test household interviews with women using a knowledge, attitude, and behavior instrument. Self-reports on cervical screening behavior will be validated by medical record reviews. Intervention efficacy will be evaluated by measuring whether there is an increase in enrollment for cervical cancer screening. (Dignan et al., 1993 and Burhansstipanov, 1993)

An American Indian Health Care Association project focuses on increasing cervical cancer screening for Native American women ages 18 and older in seven urban areas of the United States. These areas include urban Indian health centers and established intervention communities in the following areas: Seattle, Salt Lake City, Oklahoma City, Tulsa, Detroit, Milwaukee, St. Paul, and Minneapolis. The intervention (still in process at the time the article was written) includes a comprehensive study of the number of cervical cancer screenings being completed for eligible women; the development of culturally relevant educational and outreach strategies to be conducted by trained Native American community health workers; cancer education for women who come into the clinics; cultural sensitivity training for non-Indian health care providers; training regarding cancer prevention messages for Native American nurse educators working in the clinic; and appropriate case management services to look at available options and address the barriers identified by women in the target audience. The evaluation will include measurement of the efficacy of the intervention strategies and numbers of women screened and participating in treatment as a result of the intervention. (Burhansstipanov, 1993)

## NATIVE AMERICAN WOMEN

### Notes

The Prevention of Cervical Cancer in Alaska Native Women project, sponsored by the Alaska Area Native Health Service and Aleutian/Pribilof Islands Association, Inc., targets women ages 18 and older in two very different areas - one rural (St. Paul Island) and one urban (Anchorage). Women enroll into the program and, in doing so, agree to participate in the intervention which focuses on promoting knowledge and awareness of cervical cancer, its risk factors, the purpose and value of screening, and the availability of screening/follow-up services in the particular area. One site includes a "demonstration women's health clinic" that incorporates the above education into a comprehensive woman-oriented program. Special needs of women are addressed at this demonstration clinic with the inclusion of extended evening hours, longer time available for appointments, and staffing by women providers and nurse practitioners. Evaluation includes a pre- and post-intervention knowledge, attitude, and behavior survey regarding general cancer and specifically cervical cancer. A medical record review will look at numbers of women screened and follow-up activity. (Burhansstipanov, 1993)

Kaur worked with Native American women from North Dakota to address the need for culturally acceptable cancer educational material for Native American people. They developed a videotape entitled "Taking Control of Your Health: The Pap Test and Cervical Cancer" to teach women about the purpose of the Pap smear test and prevalence of cervical cancer in some Native communities. (Kaur, 1993)

#### IMPLICATIONS FOR PROGRAM PLANNERS

Work with Native American people during all aspects of program planning, implementation, and evaluation to assure appropriate access to breast and cervical cancer screening services.

Unique needs of each particular community (e.g., rural Alaska or urban Minneapolis) should be considered when developing program plans.

Train members of the local Native American community to serve as lay educators within the community.

Share research instruments that have been developed and tested by Native American people - especially within the same tribe or geographic region.

Publish known data to keep the larger cancer and public health community informed of "what works" with Native American communities.

**CITATIONS**

- Burhansstipanov L. National Cancer Institute's Native American cancer research projects. In: Cancer in Indian Country: A National Conference: Proceedings of the Second National Conference on Cancer in Native Americans. Alaska Med 1993; 35(4):248-254.*
- Dignan M, Michielutte R, Blinson K, Sharp P, Wells HB, Sands E. Cervical cancer prevention: An individualized approach. In: Cancer in Indian Country: A National Conference: Proceedings of the Second National Conference on Cancer in Native Americans. Alaska Med 1993; 35(4):279-284.*
- Gordon PR, Campos-Outcalt D, Steele L, Gonzales C. Mammography and Pap smear screening of Yaqui Indian women. Public Health Rep 1994; 109(1):99-103.*
- Joe JR, Young RS. Overview: Cancer in Indian Country - a national conference. In: Cancer in Indian Country: A National Conference: Proceedings of the Second National Conference on Cancer in Native Americans. Alaska Med 1993; 35(4):239-242.*
- Kaur JS. Helping the Native American cancer patient, their family and community: A panel presentation. In: Cancer in Indian Country: A National Conference: Proceedings of the Second National Conference on Cancer in Native Americans. Alaska Med 1993; 35(4):297-300.*
- Lanier AP. [editorial]. In: Cancer in Indian Country: A National Conference: Proceedings of the Second National Conference on Cancer in Native Americans. Alaska Med 1993a; 35(4):238.*
- Lanier AP. Epidemiology of cancer in Alaska natives. In: Cancer in Indian Country: A National Conference: Proceedings of the Second National Conference on Cancer in Native Americans. Alaska Med 1993b; 35(4):245-247.*
- Welty TK, Zephier N, Schweigman K, Blake B, Leonardson G. Cancer risk factors in three Sioux tribes. In: Cancer in Indian Country: A National Conference: Proceedings of the Second National Conference on Cancer in Native Americans. Alaska Med 1993; 35(4):265-272.*



*Notes***Background**

Most cases of breast cancer diagnosed in 1995 will be in women 65 or older. From 1984-87 the age adjusted incidence for invasive breast cancer in women 65-74 was twice that of women age 35-64 (*J of Patient Care*, 1993). Older women over age 65 are most likely to benefit from mammography but they are the least likely to get mammograms as compared with younger women (Rimer, 1993).

**Mammography***Barriers*

The article "New Issues, New Risks in Screening Women" (*J of Patient Care*, 1993) reported two types of barriers to breast cancer screening for older women: physician barriers and patient barriers. Among patient barriers, transportation was reported as significant. Many older women must rely on someone else for transportation to appointments or they may need to pay for costly public transportation services. Older women with arthritis may not want to go in for screening because of the pain they experience walking up stairs or standing for long periods of time. Forgetfulness may also be a problem.

Regarding physician-related barriers, this article reported that despite the high rate of breast cancer diagnosed in women over 65, physicians may not be as vigilant about breast cancer screening among older women as compared with younger women. One reason may be confusing messages about the efficacy of screening for elderly women. The U.S. Preventive Services Task Force (USPSTF) recommends that mammography use cease at age 74. This group believes that the incidence of breast cancer among this population may be very low and that if a woman has had normal screening results in the past, she is unlikely to develop disease when she is past the age of 74. Additionally, much of the data on women 65 and older in the literature are incomplete. In contrast to the USPSTF recommendations, the Forum Panel on Breast Cancer Screening in Older Women recommends that physicians take advantage of the annual visits made by older women to perform annual clinical breast exams and biannual mammography for women 65-74 years and for those over 75 in good general health. The panel believes that older women should also perform breast self exam regularly and should be reminded to do so.

Miller and Champion (1993) conducted a study to look at certain pre-disposing and enabling factors of mammography use for women older than 50. A mail survey was sent to a convenience sample of 161 women from four urban churches. Results indicated that higher income was associated with ever having a mammogram and adherence to guidelines. Predisposing factors for ever having a mammogram include: having a college education, having a physician recommend it, and having an intent

to get a mammogram during the next year. Having a regular place for health care and getting yearly Pap tests were also associated with ever having a mammogram.

Miller's study also looked at adherence to screening recommendations. Women with a family history of breast cancer were more likely to be adherent. Enabling variables related to adherence were income, ability to manage one's own money, willingness to pay over \$50 for a mammogram and level of mammography insurance coverage. Belief and knowledge barriers showed no association with utilization. The study concludes that addressing economic and health care delivery system factors would help promote increased mammography use among older women.

### *Programs*

A program was initiated in Chicago, Illinois to develop breast and cervical cancer educational materials and identify methods to disseminate these materials to older, low literate women. To assist in their development, five focus groups were conducted over a five month period involving 37 participants. Materials developed include a brochure about breast and cervical cancer for women over 65; a breast self exam instruction shower card; and an appointment card to help women keep track of mammograms, clinical breast exams, Pap tests, and breast self exams. This card also provides the frequency guidelines for these tests. To distribute the materials, eight of the thirty seven women who took part in the focus groups were chosen and trained to be Senior Health Advocates (SHA). This study of a peer participant model strongly supports the idea of using a peer helper approach to develop materials and to give preventive health care messages to older low literate audiences. (List et al., 1994)

Program recommendations were provided in an article by Rimer based on the results of research initiated in 1989: 1) programs specifically aimed at older women should convey a clear message that they are susceptible to breast cancer and need to be screened regularly; 2) programs should reflect the heterogeneity of older women and should focus on functional vs. chronological age status; 3) programs aimed at older women should involve physicians because many women visit the doctor several times a year; 4) a doctor's screening recommendation is extremely important for women to go in for screening; and 5) print materials should be developed with sensitivity to the vision needs of older adults and older volunteers should be recruited to educate their friends and neighbors. (Rimer, 1993)

**IMPLICATIONS FOR PROGRAM PLANNERS**

Educational materials should be developed with sensitivity to both visual and literacy needs of older women.

Programs developed for older women should take into account the heterogeneity of the women.

Peer educators may be effective in getting early detection messages to older women and encouraging screening.

Primary care physicians should be encouraged to recommend mammograms to women during their annual exams.

**Pap Smears**

No articles on studies or programs about Pap smear screening that specifically target "Women over 50" were published during this period.

**CITATIONS**

List MA, Lacey L, Hopkins E, Burton D. *The involvement of low literate elderly women in the development and distribution of cancer screening materials.* *Fam Community Health* 1994; 17(1):42-45.

Miller AM, Champion VL. *Mammography in women  $\geq$  50 years of age: Predisposing and enabling characteristics.* *Cancer Nursing* 1993; 16(4):260-269.

*New issues, new risks in screening women [article]. (Article consultants, Costanza ME, and Wright, TC.) J Patient Care* 1993; 27(4):48,51,55.

Rimer B. *Improving the use of cancer screening for older women.* *Cancer* 1993; 72(3):1084-1087.





**Background**

One of the strategies that has been found to be consistently successful in convincing women to be screened for breast and cervical cancer is the advice of a doctor or clinician. These individuals, by virtue of their training and role in society, can be powerful advocates for improving screening behavior.

This section of the document discusses barriers to breast and cervical cancer screening as identified by physicians, nurses, and office staff. The majority of the barriers represented here are from the physician's perspective. Some of the programs are strategies for physicians to address a consumer barrier.

**Mammography and Pap Smears****Barriers**

A literature review specifically regarding physician barriers to referral for screening for breast, cervical, and colon cancers was conducted by Wender in 1992. "Practice barriers" categories that affect physician behavior for recommending breast and cervical cancer screening were categorized: (1) *provider-specific barriers*, such as time constraints, forgetfulness of routine procedure for certain women's age group, another more immediate health issue focus (e.g., chronic or acute health problems get attention first and preempt time dedicated to prevention messages), insufficient skills to do screening oneself, perceived lack of positive influence on patient behavior, and uncertainty regarding the current guidelines for screening; (2) *patient-specific barriers*, such as the older age of a patient (physicians surveyed related that they were less likely to order mammograms for women as they got older, although the disease is more prevalent in older women); and (3) *health care delivery system barriers*, such as insurance coverage linked to services available. (Wender, 1993) The reader is encouraged to review this article which contains literature outside of the time frame of the current review.

A survey to ascertain physician screening practices for breast and cervical cancer was conducted with 389 physicians in West Virginia (Pearson et al., 1994). One hundred seventy eight physicians responded (46% response rate), representing the fields of family medicine, general practice, internal medicine, and obstetrics/gynecology. These self-reports indicated that screening referrals for Pap (92%) and mammography (97%) were a part of their regular clinical routine. The majority (74%) of physicians surveyed indicated that they relied on information derived from each patient's chart once they entered the office for a visit; thus they worked with people who actively sought services - they did not have a method to contact women at home regarding routine screenings. Few of the respondents (6%) had a computerized reminder system. This

finding was corroborated by a similar study of HMO physicians where it was determined that less than 10 percent used a computerized reminder system. (Rimer et al., 1993)

A study looking at 1990 data by Lurie and colleagues examined gender differences in physician referral for Pap smears and mammography screenings. Results of this study indicated that women generally prefer women doctors, especially in the fields of internal medicine or family practice for breast and cervical screening services. This study adjusted for age differences among physicians (Lurie et al., 1993). Another study examining 1987 National Medical Expenditure Survey data by Franks and Clancy noted a similar preference for female doctors for gender-specific screenings such as breast and cervical screening. However, the study did not look at other possible contributors such as the secular trend of physicians related to date of graduation from medical school and the direct relationship between age of physician and prevention-oriented screening practices (Franks and Clancy, 1993).

### **Mammography**

#### *Barriers*

A study of 198 primary care physicians in El Paso, Texas found that physicians would not recommend a screening mammogram to an eligible woman older than 50 for the following reasons: patient refused (56%), high price of mammograms (30%), inadequate insurance coverage (27%), patient not a "regular care" patient - episodic only (22%), and the physician doesn't regularly see the patient for gynecologic care (19%). (Goldman and Simpson, 1994)

An extensive study of 98 physicians, 1819 of their patients, and corroborating medical charts in the nonmetropolitan Midwest revealed the strongest predictors of women proceeding with mammography screening was the fact that a physician or clinic employee asked the woman about family history of breast cancer or identified mammography screening as desirable. (Love et al., 1993)

A study of ten family practice physicians and 839 patients in Denver, Colorado looked at physician-patient encounters and factors related to the ordering of screening mammography for eligible women. Physicians completed a detailed card for each patient including such items as physician's perception of expected compliance to mammography screening, demographic information that specifies patient age, family history, and ability to pay. The findings showed that the two most important factors that determined the ordering of a mammogram were the physician's perception of the patient's willingness to have a mammogram and the physician's belief that it was appropriate for the woman to have a mammogram. (Conry et al., 1993)

A barrier acknowledged by physicians working with Native American communities is the lack of available data that documents women's knowledge about breast and cervical cancer and their screening behavior. (Gordon et al., 1994)

### *Programs*

A large HMO-based study spanning four years (with three years of intervention) was conducted looking at multiple interventions with two different targeted groups: women aged 50-74 and physicians. The three interventions developed for the primary care physicians and radiologists consisted of: (1) a self-tutorial, "Concepts in Cancer," with an incentive of five continuing medical education (CME) credits; (2) office-based instruction on the technique of successful clinical breast exams; and (3) a tailored description of screening patterns in each physician's practice. There was a 16% increase in physician mammography screening practices between 1988 (baseline year) and 1992. In the control group, the screening practices increased by 10%. The difference between the two groups was not found to be significant. Although this can be seen as a modest impact on physicians' self-reported screening behavior, the interventions were seen as valuable and worthwhile for health professionals with limited time. It was suggested that the interventions should be studied in other settings and perhaps with even more intensive strategies. (Rimer et al., 1993)

A program designed to streamline the processes of patient risk identification, patient education, and chart maintenance; institutionalize a reminder system; and ensure physician referral for different cancer screenings including mammography and cervical cancer screening was developed by the Texas Academy of Family Physicians and the M. D. Anderson Cancer Center. Designed to address the barrier of lack of physician referral, the "SPOT Your Cancer Risk" program is a self-contained manual system to be used in physician offices. At the time of the publication of the article, the program had been field-tested but not evaluated in actual primary care practices. (Benson, 1993)

The Washington Breast Cancer Screening Consortium project addresses the barrier of lack of physician time by gearing education to medical office staff, both clinical and non-clinical employees. One of the hypotheses was that physician recommendations could be augmented by supporting messages from key office staff. After convening physician planning groups and community advisory boards to discuss the target audience, format, and general topics to be covered in the intervention, the research team conducted focus groups with medical office staff to further determine training needs and educational approaches. The resulting intervention was a series of educational modules that were conducted in the office setting. The modules included an overview of the Washington Breast Cancer Screening Consortium project and how physicians were involved and are very supportive; breast cancer data; how nursing staff

and medical office staff can serve as "change agents" to augment the physician's message; and the process and value of screening mammography, clinical breast exams, and breast self exams. The final session was interactive and included role-playing and decision-making regarding realistic clinical situations with women's different perceptions of breast cancer screening. Educational materials, community resources, and breast models were given to all participants and the practices they represented. Process evaluation examined each targeted practice's participation in the program, attendance at the educational workshops, and individual evaluations of the workshops. Findings indicated that the degree of community (both physician community, and less directly, patient community) penetration of the education was higher than traditional continuing education courses; that there is a benefit to training medical and non-medical staff in the same setting to enhance the team approach to patient education; and that community resources were utilized more often as a result of the program. (Mahloch et al., 1993)

Nielsen and colleagues compiled a literature review of articles related to the barrier of perceived or actual pain during mammography screening and how it can be addressed by clinicians. The article suggests that nurses and radiologists can benefit from training on counseling techniques, preparing the woman for the exam, and alternatives in the screening procedure (e.g., warming the metal plates between exams) that would enhance the woman's experience. (Nielsen et al., 1993)

Another strategy to enhance the physician's message regarding breast cancer screening is to tailor it to meet the individual needs and interest level of the woman as well as address her stage of readiness for screening. Illustrating the concept of tailored messages, Voelker highlighted a University of North Carolina study conducted by Celette Sugg Skinner. Two physician practices were divided into an intervention and control practice with a total of 435 women aged 40-65. The women in practice A were contacted by telephone interviewers to determine how messages should be tailored, then later received the tailored messages regarding the importance of mammography. Women in practice B received standard messages also regarding the importance of breast cancer screening. Although it was noted that the statistical power is not high, the evaluation indicated that 44% of the women who received the tailored messages came in to be screened as compared with 31% of the women who received the standard letter. The evaluation also indicated that women with tailored messages remembered them and read them in their entirety more than the women who received standard letters. (Voelker, 1994)

## PHYSICIANS

### Notes

#### IMPLICATIONS FOR PROGRAM PLANNERS

Physicians who are more comfortable with performing clinical breast exams (such as obstetricians and gynecologists) can be assets to other physicians and clinic staff. Find an appropriate way that these physicians can influence their peers who have expertise in other medical areas and who are in clinical situations that are optimal for referring women for screening.

Develop a user-friendly physician reminder system to be incorporated in the current clinic setting. Be sure it is easy and relevant to the system already in place.

Educate women about the importance of discussing their family history of breast cancer and their questions regarding the personal appropriateness of mammography. This will prompt an important discussion with the physician which may lead to a screening referral.

Providing physician and clinic staff trainings based on a realistic needs assessment and with incentives, such as CME's or refreshments, can be effective in increasing screening referrals.

Multiple interventions aimed at clinicians but also other relevant target groups (e.g., eligible women) enhance the opportunity of increased screening.

Physician/patient interactions may have more importance in information gathering than solely a chart review for ordering mammography screening. More research should be done in this area to make sure that the appropriate decisions are being made with the optimal amount of information.

If baseline screening utilization data is missing or in error, encourage providers to develop a data tracking program to create useable databases.

### Pap Smears

#### Barriers

A study of one hundred ninety eight physicians in El Paso, Texas revealed the following physician barriers to screening women over the age of 40 for cervical cancer: patient refusal (59%), patient comes in for episodic care only (26%), physician refers to other doctors for Pap smears (12%), and the patient was embarrassed (10%). (Goldman and Simpson, 1994)

A study conducted in Scotland consisted of focus groups and questionnaires for women ages 18-73 to determine women's knowledge

and attitudes regarding their experiences with the Pap smear test. Results identified to inform nursing practice and service delivery included: women prefer female clinicians; women's concerns that they have inadequate information about the purpose and meaning of the Pap test; and some women's sense of lack of closure, that it is difficult in many cases to obtain results of a Pap test, due to several clinic practices of "if you don't hear from us then you can assume it was a normal result." (McKie, 1993)

### Programs

No articles about programs on Pap smear screening that specifically target physicians were published during this period.

IMPLICATIONS FOR PROGRAM PLANNERS
In developing programs to address barriers to practice, involve the service providers as well as the patients themselves.
Encourage providers to make female clinicians available to women who prefer them.
Encourage physicians and other relevant clinic staff to make time within a scheduled appointment to ensure that a woman is aware of the purpose of a Pap smear test.

### CITATIONS

- Benson DM. *SPOT your cancer risk: An office-based cancer prevention and detection system. Cancer Bull* 1993; 45:181-184.
- Conry CM, Main DS, Miller RS, Iverson DC, Calonge BN. *Factors influencing mammogram ordering at the time of the office visit. J Fam Pract* 1993; 37:356-360.
- Franks P, Clancy CM. *Physician gender bias in clinical decisionmaking: Screening for cancer in primary care. Med Care* 1993; 31:213-218.
- Goldman DA, Simpson DM. *Survey of El Paso physicians' breast and cervical cancer screening attitudes and practices. J Community Health* 1994; 19(2):75-85.
- Gordon PR, Campos-Outcalt D, Steele L, Gonzales C. *Mammography and Pap smear screening Yaqui Indian Women. Public Health Rep* 1994; 109(1):99-103.
- Love RR, Brown RL, Davis JE, Baumann LJ, Fontana SA, Sanner LA. *Frequency and determinants of screening for breast cancer in primary care group practice. Arch Intern Med* 1993; 153:2113-2117.

## PHYSICIANS

### Notes

- Lurie N, Slater J, McGovern P, Ekstrum J, Quam L, Margolis K. Preventive care for women: Does the sex of the physician matter? *N Engl J Med* 1993; 329:478-482.
- Mahloch J, Taylor V, Taplin S, Urban N. A breast cancer screening education intervention targeting medical office staff. *Health Education Research* 1993; 8(4):567-579.
- McKie L. Women's views of the cervical smear test: Implications for nursing practice - women who have had a smear test. *J Adv Nurs* 1993; 18:1228-1234.
- Nielsen B, Miaskowski C, Dibble SL. Pain with mammography: Fact or fiction? *Oncol Nurs Forum* 1993; 20(4):639-642.
- Pearson RJC, Simon K, Pollard C, Frey-McClung V. Increasing screening for breast and cervical cancer in West Virginia. *WV Med J* 1994; 90(2):50-51.
- Rimer BK, Ross E, Balshem A, Engstrom PF. The effect of a comprehensive breast screening program on self-reported mammography use by primary care physicians and women in a health maintenance organization. *J Am Board Fam Pract* 1993; 6:443-451.
- Voelker R. Personalized messages invite more mammography [article]. *JAMA* 1994; 271(10):733-734.
- Wender RC. Cancer screening and prevention in primary care: Obstacles for physicians. *Cancer* 1993; 72:1093-1099.







